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REMARKS

Claims 1-25 were rejected under 35 USC 102 as being anticipated by Way et al, US Patent Application Publication No. 20060275034. Applicants respectfully traverse.

The Examiner asserts that element 20 of the reference corresponds to the transceiver pool of claim 1, citing lines 2-10 of paragraph 0047, and that coupler pair 36 corresponds to the optical director of claim 1, citing paragraphs 0048 and 0051. Applicants respectfully disagree.

Element 20 has a line-side receiver port labeled 50, a line side transmitter port labeled 44, and unlabeled customer-side ports (one transmitter port and one receiver port) along the dashed line toward the bottom of the FIG. 1. In connection with the line-side *receiver*, the reference teaches that it includes either a fixed or a tunable optical wavelength filter. The existence of the filter demonstrates that the incoming optical signal contains a plurality of wavelengths which gives rise to the need of a filter but, in any event, the tunable optical filter of element 20 is immaterial because claim 1 does not address the incoming signal; only the transmitted signal. In connection with the line-side *transmitter* (which is material), there is no teaching at all regarding what wavelength or wavelengths the transmitter outputs, and there is certainly no teaching or suggestion that the transmitter's output signal is of a single wavelength that is controlled by of a control signal. Claim 1, in contradistinction, even before the instant amendment, specifies "a signal of a particular wavelength at said ODS connection point" and specifies that the "particular wavelength is specified by a control signal." As indicated above, the signal out of the reference's line-side transmitter is NOT of a wavelength that is specified by a control signal, and the signal into the line-side transmitter is not of a particular wavelength. Hence, the correspondence relative to the transceiver pool of claim 1 fails, and, therefore, claim 1 is not anticipated by the reference.

As for coupler pair 36, these are passive elements that employ no control signals. Their signal arrangement is fixed. In contradistinction, the optical director of claim 1 before the instant amendment to claim 1 defined the optical direction to be "controllable to send any part of a signal applied to any one of its ports to any other of its ports." Since that which the Examiner believes to correspond to the optical director fails in this regard

because it is not controllable at all, the correspondence fails and, therefore, claim 1 – even in its unamended form -- is, again, not anticipated by the reference.

The above notwithstanding, and not in an effort to overcome the reference, claim 1 is amended to more particularly define the invention and, as amended, claim 1 is clearly not anticipated by the reference, and neither are any of the remaining claims that depend on claim 1. For example, relative to the control of coupler pair 36, amended claim 1 specifies a "control signal applied to the optical director element," and no such control signal is applied to pair 36.

As for the dependent claims, they, of course, are unanticipated by the reference by virtue of their dependence on claim 1. Additionally, it is respectfully submitted that at least some of the claims include limitations that independently make the claims not anticipated. For example, in connection with claim 5, nowhere in the reference is there any teaching as to the nature of the signals that are created, whereas claim 5 explicitly specifies that the signals are optical signals that are suitable for long-reach optical transmission.

Regarding claim 7 the Examiner points to an element that in connection with claim 1 the Examiner asserts to correspond to the transceiver pool, and now asserts it to be the service layer device (albeit different FIGS. and different reference numbers, but the same element). Claim 7, in contradistinction, specifies a service layer device *in addition to* the transceiver pool. The Examiner's reference to FIG. 6a and element 528 does not meet the limitations of claim 7 and therefore, claim 7 – even before the current amendment to the claim – is not anticipated by the reference. The current amendment to claim 7 specifies that the service device layer is "interposed between customer signals and the CS connection point." No such arrangement is described or suggested in the reference.

Regarding claim 9, the Examiner points to paragraph 0072, lines 5-10, and asserts that element 528 performs a routing or multiplexing function. A routing function is a function whereby a signal may be routed to different locations, based on some control, and a multiplexing function somehow combines more then one signal into a single flow. Respectfully, neither of these functions is performed by element 528. The text cited by the Examiner states:

> Client side transmitter 536 and client side receiver 532 of working WDM transponder 528 are connected back to back to a receiver 538 and a transmitter 540 of client equipment. The same arrangement is installed at the protections WDM transponder 542, as shown in FIG. 6(a).

There is no routing or multiplexing whatsoever discussed in the above-quoted passage, relative to element 528. (There is multiplexing in the 1:2 coupler 568, but that is not what the Examiner asserts to be the "service layer device" of claim 7.)

Regarding claim 11, the Examiner states

> at the input of fibers 812 and 814, in line amplifiers, which is customer side connection point it is refer to an electrical signal.

Respectfully, this sentence is not understood. Regardless, however, applicants respectfully submit that the line amplifiers are NOT electrical amplifiers, and that nothing that is shown in FIG. 9a is electrical. Nor is anything that is shown in FIG. 9a a CS connection point. The text in paragraph 0081 (cited by the Examiner) discusses optical elements and signals, rather than electrical elements or signals.

If the Examiner will maintain this rejection, applicants respectfully request a clearer explanation of the rejection's rationale.

It should also be mentioned in passing that the Examiner is not free to pick an element A in one FIG. and an element B in another FIG. and assert a correspondence to a combination of elements A and B, **unless** the Examiner demonstrates that the embodiment in the first or the second FIG. relate to some embodiment that does, indeed, have the asserted combination of elements A and B.

Regarding claim 16, the Examiner points to paragraph 0076, which states:

> Referring now to FIG. 7(a), ring 610 is provided. When the transmitted signal in the central location is sent simultaneously to fibers 612 and 614, ,a 1×2 switch 616 can be located at every node so that the receiver receives either fiber 612 or 614. In the event of a break in a fiber 612 or 614, a WDM transponder senses the loss of optical power or a high bit-error-rate, and sends a control signal to trigger the local 1.times.2 optical switch 616 to switch to a different port, as shown in FIG. 7(b). In network architecture of FIG. 7(a) and 7(b), there are no open switches, as distinguished from the embodiments of FIGS. 1(a)-6(c), on fibers 612 and 614, because the central location has electronic termination which breaks ring 610.

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Alas, a number of clarity issues arise. First, "ring 610" according to FIG. 7a encompasses the entirety of the FIG. Therefore, ring 610 must refer to the combination of the two fibers, the nodes, and the unlabeled elements at the top of the FIG. Second, the paragraph makes reference to the "transmitted signal in the central location" but this is the first time that the term "central location" appears in the reference, and the paragraph fails to explain what is, or what constitutes, "the central location." For lack of anything else, applicants assume that the central location is the unlabeled elements at the top of FIG. 7 (although an assumption cannot form the basis of a rejection under 35 USC 102). Third, although the Examiner cites this paragraph in connection with a claim that specifies control signals, this paragraph fails to discuss or even imply anything that resembles control signals. In short, in applicants' view, the reference generally and the cited paragraph in particular, fail to describe a "management network for communicating said control signals" (emphasis supplied).

As for claims 18 and 19, the Examiner cites paragraphs 0078-0080, but the only control signal that is mentioned in these paragraphs is found in paragraph 0076, where it is taught that a WDM senses the loss of optical power and sends a control signal to trigger the local optical switch 616. It addresses no other control signals, it fails to teach how those control signals are send on the fiber shown, or to a different medium; whether the control signals are electrical or optical, in-band, or out of band.

Regarding independent claim 21, the Examiner cites paragraph 0047, which states

> Referring now to FIG. 1(a), an all optical network 10 for optical signal traffic provides at least a first ring 12 with at least a first clockwise fiber 14, a second counter-clockwise fiber 16 and a plurality of network nodes 18. Each node 18 has at least a WDM transponder 20 with a line-side transmitter 22 and a client-side receiver 24 in a first direction, and a line-side receiver 26 and a client-side transmitter 28 in an opposing second direction. Line-side receiver 26 can include a fixed or a tunable optical wavelength filter 30. At least first add and a first drop broadband couplers 32 and 34 are positioned on each fiber 14 or 16. Each coupler 32 and 34 has three ports for through traffic and for adding or dropping local traffic. First add and first drop broadband couplers 32 and 34 minimize a pass-through loss in fibers 12 or 14, and to ensure that he power levels of locally added wavelengths can be equalized to those of through-wavelengths.

From this paragraph the Examiner asserts that the reference teaches a step of a node receiving a control signal $\lambda 1$. Respectfully, the above-quoted passage provides no

support for this assertion and, moreover, in applicants' view, $\lambda 1$ indicates the wavelength of the information signal, and not a control signal. The Examiner asserts that there is tuning of a first receiver pool to deliver a signal at one of N connection point on the line side 22. Respectfully, no tuning is taught. Even if the Examiner were to point to the existence of a tunable filter for incoming signals, it must be realized that the setting of the tunable filter may be in the course of a provisioning operation; off line, so to speak. There is simply no teaching regarding the notion of wavelength tuning in response to a received control signal. Moreover, there is no structure whatsoever (and consequently no teaching) for creating "an information-bearing signal from said corresponding ODS connection point, where said information-bearing signal that is delivered by said first transceiver pool is at a wavelength specified by said control signals"; i.e., an outgoing signal that is of a particular wavelength, as specified by a control signal. Finally, amended claim 21 pertains to an apparatus where the number ports that interconnect the transceiver pool to the optical director is at least 2, and the number of ports of the optical director is at least 4. The processes of the reference do not deal with such an arrangement.

Consequently, applicants believe that claim 21, and dependent claims 22-25 are not anticipated by the reference.

Claims 26-45 were rejected under 35 USC 101 as being anticipated by Lichtman et al, US Patent No. 7,072,584 [sic]. Applicants respectfully traverse.

The Lichtman et al reference teaches the use of N fixed wavelength transmitters and one tunable wavelength transmitter. The tunable transmitter is employed only when one of the fixed transmitters fails (at which time the tunable transmitter is tuned to the wavelength of the failed transmitter). Each signal of an employed transmitter is split into two parts, and each part is transmitted to a fiber, but in the opposite direction.

The Examiner asserts that the transceiver 86 (FIG. 3 of the reference) corresponds to the tunable transceiver of claim 26. This appears to be a viable assertion. The Examiner also asserts that elements 76 correspond to the optical director of claim 26. This, in applicants' view is NOT a proper assertion.

Elements 76 are connected to lines cards 74, and not connected to tunable transceiver 76. Tunable transceiver 76 is provisioned to operate at a specified

wavelength only when a line card of the same wavelength is not operational. At such a time, the corresponding element 74 is NOT used. What that means is that if the first step of claim 26 is executed (element 86 is provisioned) then the step of provisioning an element 76 to transfer a signal of the same wavelength IS NOT executed. Hence, claim 26 is not anticipated by the reference.

Additionally, claim 26 specifies that the optical director transfers a signal (that is applied to the director) "to a port" of the optical director "that is specified by a control signal applied to" the optical director. That is, a control signal is applied that specifies a port. The method described by the reference does not apply a control signal that specifies a port. It's control signal is merely a directive to output a pair of signals, or to not output a pair of signals. The pair of signals is always applied to a pair of respective ports. Hence, again, claim 26 is not anticipated by the reference.

The above notwithstanding, and not in an effort to overcome the reference, claim 26 is amended to more particularly define the invention, specifying that the control signal is indicative of other than a failure condition. This additional limitation, in and of itself, makes claim 26 not anticipated by the reference.

Claims 27-40 depend on claim 26 and are, therefore, also not anticipated by the reference.

Regarding independent claim 41, it is amended to specify that the provisioning pertains to a wavelength. This is different from the reference in the sense that even if the control signals that are applied to elements 76 are considered to be "provisioning," such provisioning pertains to whether the signals are extended to elements 78 or not, rather than specifying a wavelength of operation. Therefore, it is respectfully submitted that amended claim 41 is not anticipated by the reference. Claims 42-45 depend on claim 41.

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In light of the above amendments and remarks, applicants respectfully submit that all of the Examiner's objections and rejections have been overcome. Reconsiderations and allowance are respectfully solicited.

Respectfully,
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